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### Antioxidant Activity and Optimal Manufacturing Conditions of Purple Sweet Potato Lactic Acid Bacteria Drink

[Yoshiharu SASAKI](#)<sup>1)</sup> and [Riichiro OHBA](#)<sup>1)</sup>

*1) Department of Applied Microbial Technology, Sojo University*

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In the current studies, we produced a purple sweet potato lactic acid bacteria drink (PSPLABD) using a variety of lactic acid bacterial strains. The various PSPLABD were analyzed for color, pH, and flavor. We found that *Lactobacillus helveticus* B-1 was the most efficient strain for fermentation. In addition, optimal conditions included a purple sweet potato content of 10%, a skim milk content of 7%, a white sugar content of 7.5%, fermentation at 35°C, and a pH adjusted to 3.5 (fermentation time ~ 24 h). PSPLABD had 1,1-diphenyl-2-picrylhydrazyl radical-scavenging activity ( $IC_{50} = 130 \mu\text{l}$ ) and inhibited lipid peroxidation (equivalent to 103  $\mu\text{M}$  butylated hydroxytoluene). Fermentation had no effect on the antioxidant activity of PSPLABD, but the purple sweet potato and the lactic acid bacteria drink components had a synergistic effect on the inhibition of lipid peroxidation. Thus, the PSPLABD could be used as a health food which has antioxidant activity and an appealing flavor and color.

**Keywords:** [PSP](#), [LABD](#), [PSPLABD](#), [optimum conditions](#), [antioxidant activity](#)

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